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AN ELECTORAL INTERVENTION THAT HAS CLICKED

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The implementation or evaluation of any policy decision must consider not just abstract reasoning but base it on empirical and historical evidence. This holds true for the debate on the question of persisting with the electronic voting machine, or EVM, in the Indian electoral process. Much has been said by commentators and political party representatives about the futility of using the EVM because of the possibility of electoral fraud by manipulating the technology that drives the machine. Informed critiques of the EVM and its handling have helped in some ways, one of them being the universal implementation of the Voter Verifiable Paper Audit Trail (VVPAT) that allows for a layer of verification to the electoral process.

EVM hacking claim: Delhi Police files FIR

But more often than not, there have been accusations made about the EVM that do not stand up to scrutiny or reality, primarily made by political parties that have chosen to blame EVM manipulation as an easy excuse for their losses in various elections. Also, despite there being barely any shred of evidence to show that any election held recently was subject to electoral fraud through a manipulation of EVMs, and repeated assurances by the Election Commission of India (ECI) of the robustness of the administrative and technical safeguards in place to prevent EVM tampering, the swirl of accusations refuses to die down.

While glitches and machine failures have been reported or misreported as outcomes of “EVM hacking”, administrative errors in transporting the machines have been presented as evidence of tampering. The fact that glitches being reported have gone up is true enough. The replacement rate for machines deployed in the by-elections of Uttar Pradesh in 2018 went up to as high as 20% because of failures — primarily of the VVPAT machine that is adjunct to the control and ballot units of the EVM. These glitches had caused difficulties in conducting polls in the Karnataka Assembly elections, in May 2018, as well. But there were specific reasons for these.

The introduction of the VVPAT to allow for a paper count of the registered votes has also added a level of complexity to the otherwise simple technology that runs the EVM. The VVPAT was also rushed into service because of the constant carping about the possibility of EVM hacking by political parties. The VVPAT failure rates were high early on in elections held in late 2017 and early 2018, with hardware issues occurring during transportation and exposure to extreme weather conditions. The ECI sought to correct these problems by repairing components related to the printing spool of the VVPAT machines and the deployment of many corrected machines in the three Assembly elections held recently — Madhya Pradesh, Rajasthan and Chhattisgarh — resulted in much reduced replacement rates (close to 2.5% in Madhya Pradesh and 1.9% in Chhattisgarh). This suggests that the ECI is relatively better prepared to handle VVPAT-related glitches in the upcoming Lok Sabha elections.

Why EVMs must go

The VVPAT’s introduction and use is also necessary to address doubts related to the possibility of EVM hacking despite the safeguards in place.

The ECI has reassured us many a time that the simplicity of the architecture of the EVM (software written onto a one-time programmable chip; standalone machines that are not networked; the lack of any frequency receiver or wireless decoder that will allow for

communication externally; and advancements in newly deployed machines that allow for self-diagnostics to render the machines tamper-proof among other things) has helped it evade some of the misgivings experienced by EVMs used in other countries.

Combining this with administrative safeguards that allow for rigorous checks at various levels, such as after manufacture, during deployment, and so on; randomisation of deployment of machines, a listing of candidates in alphabetical order rather than on party basis on ballot units; sealing of machines by political party representatives after polling and storing in high security "strong-rooms", the ECI has asserted that all these have made tampering impossible.

With these safeguards in place, it would require "insider mischief" by officials of the ECI, or by employees of the EVM manufacturers (Bharat Electronics Limited and the Electronics Corporation of India Limited) or the introduction of Trojans (malicious software) at the chip burning stage (a process currently outsourced to overseas firms) and which remain undetected by the manufacturers during their "first level checks" of the firmware, to create problems. Critics of the EVM suggest that there is a non-zero possibility of such ways that will result in the deployment of tampered EVMs susceptible to manipulation. These are far-fetched but technically possible scenarios that assume malicious actions by vendors that are deliberately ignored by the manufacturers, "insider fraud" that remains undetected, and coordinated actions by agents who manage to shift vote counts in favour of their party using the manipulation that is possible with the tampered EVMs.

Fortunately, the implementation of the VVPAT as a device has rendered it possible to verify if at all such schemes have happened to subvert the mandate of voters. VVPATs will help find if there is anything malicious that has gone on by comparing machine tallies with the hand-counted tally of the slips.

There is no question of going back to the paper ballot: S.Y. Quraishi

Currently, the ECI allows for the votes recorded in the VVPAT to be counted in only one randomly chosen polling booth in each Assembly segment. Statisticians such as Atanu Biswas of the Indian Statistical Institute, Kolkata, and former bureaucrat K. Ashok Vardhan Shetty have argued that this is not enough. Mr. Shetty has suggested that a more robust count of VVPAT slips would entail the setting of a State-wise number of the booths to be counted, that is adjusted for population, voting turnout and other factors. This is a legitimate suggestion that the ECI should pay heed to in order to dispel any lingering doubts about the electoral process.

That being said, the idea that EVMs should be junked because of the possibilities mentioned above and that we should return to paper ballots as the means of voting is not just problematic but is also an ahistorical argument. In a recent paper, researchers such as Shamika Ravi et al have shown that the use of EVMs had led to a significant decline in election fraud such as rigging, booth capturing, ballot stuffing, etc in many States and even resulted in increased voter turnout especially of the vulnerable and poorer sections of the Indian electorate. I had found, in a statistical study for The Hindu in April 2016, that not only had EVMs rendered "invalid votes" to be a complete non-factor but also invalid votes had significantly affected several Assembly elections in the past.

Restoring faith in EVMs

In other words, the EVM has served the purpose which was the reason for its deployment by the ECI in the first place — to assure free and fair elections, and to ease the process of voting. Improvements to the EVM are certainly possible, but a return to paper ballots is an untenable proposition.

In sum, the best possible way of improving upon our electoral process and bringing in greater trust in it is in a continuing and constructive critique of India's EVM through a scrutiny of the election process including technical assessments of the devices used. But there should be no place for an uninformed dismissal of the EVM as a part of the discourse as this will only increase distrust in our democratic process.

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